

IN THE CLAIMS:

1. (Currently Amended) An information write device comprising:

optical system means for radiating information recording tracks and guide tracks with at least two light spots;

optical detector means for detecting each of reflected beams of light generated by the radiation of each of said light spots;

a pickup for moving said optical system means along a direction of arrangement of said information recording tracks and said guide tracks;

signal generating means for generating each of push-pull signals in accordance with each of detection signals outputted from the optical detector means when said pickup moves along the direction of arrangement of said information recording tracks and said guide tracks; and

operational means for generating a contrast signal, having contrast information in the direction of arrangement of said information recording tracks and said guide tracks, by adding the push-pull signals corresponding to said at least two light spots;

wherein said optical system means allows one of said at least two light spots to radiate said information recording track and at the same time the other light spot to radiate a portion displaced from the center of said information recording track or said guide track, and

wherein said optical system means further includes at least one additional light spot, non-collinear with said at least two light spots.

2. (Original) The information write device according to claim 1, wherein said optical system means comprises:

a grating for diffracting beams of light emitted from a light source; and
a prism for generating said at least two light spots by refracting at least two diffracted beams of light (diffracted by said grating) at a predetermined angle of refraction, and for radiating said information recording track with one of said at least two light spots and, at the same time, for radiating a portion displaced from the center of said information recording track or said guide track with the other light spot.

3. (Original) The information write device according to claim 2, wherein angles of incidence of said at least two diffracted beams of light emitted from said grating to be incident on said prism are different from each other.

4. (Original) The information write device according to any one of claims 1 to 3, further comprising determination means for determining a positional relationship between said pickup and a target position in accordance with said contrast signal immediately before said pickup reaches at least said target position when said pickup is allowed to move to the target position along said direction of arrangement.

5. (Previously Presented) The information write device according to any one of claims 1 to 3, further comprising:

amplifier means for adding and amplifying, with a predetermined amplification factor, push-pull signals corresponding to remaining light spots except for a push-pull signal corresponding to one of said at least two light spots; and

subtractor means for performing subtraction between the signal amplified by said amplifier means and the push-pull signal corresponding to one of said at least two light spots,

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in fig. 1

wherein the signal generated by said subtracter means is employed as a tracking error signal to perform tracking servo control on said pickup.

6. (Previously Presented) The information write device according to any one of claims 1 to 3, wherein said amplification factor is set to a ratio K/n , in which K is a ratio of intensity of a remaining light spot to intensity of said one light spot, n is the number of said remaining light spots.

7. (Previously Presented) The information write device according to any one of claims 1 to 3, wherein the total number of said light spots is three.

8. (Currently Amended) An information read device comprising:
optical system means for radiating information recording tracks and guide tracks with at least two light spots;

optical detector means for detecting each of reflected beams of light generated by the radiation of each of said light spots;

a pickup for moving said optical system means along a direction of arrangement of said information recording tracks and said guide tracks;

signal generating means for generating each of push-pull signals in accordance with each of detection signals outputted from the optical detector means when said pickup moves along the direction of arrangement of said information recording tracks and said guide tracks; and

operational means for generating a contrast signal, having contrast information in the direction of arrangement of said information recording tracks and said guide tracks, by adding the push-pull signals corresponding to said at least two light spots,

wherein said optical system means allows one of said at least two light spots to radiate said information recording tracks and at the same time the other light spot to radiate a portion displaced from the center of said information recording track or said guide track, and

wherein said optical system means further includes at least one additional light spot, non-collinear with said at least two light spots.

9. (Original) The information read device according to claim 8, wherein said optical system means comprises:

a grating for diffracting beams of light emitted from a light source; and
a prism for generating said at least two light spots by refracting at least two diffracted beams of light (diffracted by said grating) at a predetermined angle of refraction, and for radiating said information recording track with one of said at least two light spots and, at the same time, for radiating a portion displaced from the center of said information recording track or said guide track with the other light spot.

10. (Original) The information read device according to claim 9, wherein angles of incidence of said at least two diffracted beams of light emitted from said grating to be incident on said prism are different from each other.

11. (Original) The information read device according to any of claims 8 to 10, further comprising determination means for determining a positional relationship between said pickup and a target position in accordance with said contrast signal immediately before said pickup reaches at least said target position when said pickup is allowed to move to the target position along said direction of arrangement.

12. (Previously Presented) The information read device according to any one of claims 8 to 10, further comprising:

amplifier means for adding and amplifying, with a predetermined amplification factor, push-pull signals corresponding to remaining light spots except for a push-pull signal corresponding to one of said at least two light spots; and

subtractor means for performing subtraction between the signal amplified by said amplifier means and the push-pull signal corresponding to one of said at least two light spots,

wherein the signal generated by said subtractor means is employed as a tracking error signal to perform tracking servo control on said pickup.

13. (Previously Presented) The information read device according to any one of claims 8 to 10, wherein said amplification factor is set to a ratio K/n , in which K is a ratio of intensity of a remaining light spot to intensity of said one light spot, n is the number of said remaining light spots.

14. (Previously Presented) The information read device according to any one of claims 8 to 10, wherein the total number of said light spots is three.
